

Notice of Allowability

Application No.

10/664,113

Examiner

Hai H. Huynh

Applicant(s)

MARCHESINI ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to application filed on 9-17-2003.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☒ The drawings filed on 17 September 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 9-17-2003
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

EXAMINER'S AMENDMENT

Inventorship

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. David A. Burns on April 12, 2004.

The application has been amended as follows:

In The Specification

Page 8 in line 13 delete "microprocessor 14" and substitute therewith -- microprocessor 40--.

Page 9 line 5 and 7 delete "microprocessor 14" and substitute therewith --

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microprocessor 40--.

In The Claim

Claim 6 line 2 delete "the shaft" and substitute therewith --a shaft--.

Claim 16 line 2 delete "an fuel injector transistor" and substitute therewith --a fuel injector transistor--.

Allowable Subject Matter

3. Claims 1-20 are allowed.

4. The following is an examiner's statement of reasons for allowance:

The prior art made of record fails to teach/show an electronic control unit integrated into the air throttle body 18, the electronic control unit having a cover 70 engaged to the throttle body, a chamber 78 defined directly between the cover 70 and the exterior surface; and a heat sink member 82 exposed within the chamber and projecting outward through the cover 70; wherein the air throttle body 18 is made of a thermally conductive material for transferring heat from the chamber into the air through passage; and wherein the heat sink member 82 is made of a thermally conductive material for transferring heat through the cover 70.

an inner compartment 78 defined by the throttle body 18 and the circuit board 64; wherein the throttle body 18 is made of a thermally conductive material for transferring heat from the inner compartment 78 into the throttle body 18 by thermal convection, through the throttle body 18 by thermal conduction and into the through passage by

thermal convection; a heat sink member 82 exposed within the inner compartment and disposed adjacent the circuit board 64; a microprocessor 40 located in the inner compartment 78; and at least one driver 90 engaged directly to the heat sink member wherein heat generated by the driver 90 is transferred away from the inner compartment 78 and into the heat sink member 82 by thermal conduction and out of the heat sink member 82 away from the inner compartment 78 by thermal convection.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Smith et al (2001/0045206), Powell (6,386,151), EP 1108882, and Nakano et al (JP-2002-285866) show an ECU mounted on a throttle body. Wakeman (6,494,186) teaches an ECU mounted on the intake manifold having a heat sink 45. Trublowksi et al teach a metallic throttle body wall 159 with an integrated ECU and a heat sink 125. Russo (4,690,240) teaches an exhaust system having a valve body, an insulator 38, a control unit and heat sink 56. Trublowksi et al teach a plastic throttle body 20 with an ECU 60 and a heat sink 90.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai H. Huynh whose telephone number is (703) 306-

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9183. The examiner can normally be reached on Monday through Thursday from 7:30 am to 6:00 pm.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hai H. Huynh
Examiner
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